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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,607	10/24/2003	Tatsumi Kageyama	1163-0475P	7307

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EXAMINER
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NATNITHITHADHA, NAVIN

ART UNIT	PAPER NUMBER
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3736

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/691,607

Applicant(s)

KAGEYAMA, TATSUMI

Examiner

Navin Natnithithadha

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1, 2 and 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 5-13 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Response to Amendment*

1. Claim 1 has been amended. Claims 3 and 4 have been cancelled.

Claims 1, 2, and 5-13 are pending.

### *Response to Arguments*

2. Applicant's arguments filed 30 November 2005 have been fully considered but they are not persuasive.

The Applicant contends that “[i]t is respectfully submitted that in DeVito there is no disclosure of displaying an operation description on a display unit and allowing the operator to associate to associate a particular brain wave pattern to the operation by displaying a user input key.” However, DeVito teaches mapping codes to represent “no buttons pressed,” “button A depressed,” “button B depressed,” and “button C depressed” (see col. 12, lines 12-36). The codes control the movement of a pointer in a display (see col. 12, lines 38-48). Claim 1 states “wherein said display unit further displays an image corresponding to a user input key” (emphasis added). DeVito does teach a display unit displaying an image, i.e. pointer, corresponding to a user input key, i.e. pressing/depressing of buttons A, B, and C. Moreover, “displays an image corresponding to a user input key” is a functional limitation of the display unit. Using such language is a recitation of the intended use of the claimed invention, which must result in a structural difference between the claimed invention and the prior art in order

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to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963). Since DeVito anticipates claim 1, the rejection of claim 1 is MAINTAINED. Since the Applicant argument for claim 1 is the same for claim 2, the rejection of claim 2 is MAINTAINED.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 1 and 2 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claim 1, the structure of the control apparatus includes: a first storing unit, a second storing unit, a brain wave detecting unit, a brain wave pattern generating unit, a brain wave pattern comparison unit, and a signal processing unit. Because the "display unit" is written in the functional limitation of the brain wave pattern generating unit, it is not clear as to whether the display unit is an additional element to the claimed structure. Since the Applicant's contention is that the function of the display unit is a critical feature of his invention, the Applicant must affirmatively claim the display unit as an additional element to the structure.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeVito, US 6,254,536 B1, in view of Musha, US 6,349,231 B1.

In regards to claim 1, DeVito teaches an apparatus using bioelectrical signals such as EEG for the control of systems (see abstract), comprising: a headband (brain wave detecting unit) 20 having EEG electrodes 23, 24, 25; and a CPU 53 for analyzing each epoch (brain wave patterns), generating control parameters (generating brain wave pattern) based on the epochs, then comparing the control parameters with baseline control parameters for subsequent mapping to control/command codes used by a control system (see col. 10, lines 11-19). The CPU 53 is connected to a memory 56 for storing data pertaining to control parameters and control codes (see fig. 8). DeVito does not teach "when receiving an instruction for associating a brain wave pattern generated by said brain wave pattern generating unit with an operation description displayed on a display unit, the operation description specifying an operation to be performed on an apparatus to be controlled, said first storing unit stores the generated brain wave pattern therein while associating it with the operation description." However, Musha teaches an apparatus for automatically determining the present will of a human subject, including: display 160 for displaying the wills (operation description) of

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the subject based on a neural network using sets of physiological state reference variables corresponding to known wills (see col. 2, lines 19-23). The wills can be "yes", "no" or neither phrases but not limited to these types of wills (see col. 3, lines 17-57). "The neural network can be trained to recognize other will (such as the will to move a computer cursor up, down, left or right, the will to input the letter "a", "b" or "c" etc.)" (see col. 3, lines 58-62). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify DeVito's invention with displaying wills in order to have a human-machine interface which would benefit "patients suffering with symptoms of such diseases as amyotrophic lateral sclerosis ("ALS"), who have near-normal mental function but are unable to express their will" (see Musha, col. 1, lines 37-53). DeVito teaches the limitation "wherein said display unit further displays an image corresponding to a user input key" as discussed above in the "Response to Arguments."

As to claim 2, DeVito teaches using the apparatus to generate control/command signals to a control system, such as digital video, video games, movies, interactive environments, virtual environments, alarm systems, or other devices or systems, to control its operation. The apparatus to be controlled is only the "intended use" of the claimed invention of claim 1. Thus, DeVito's apparatus is capable of controlling the operations of a vehicle.

### ***Allowable Subject Matter***

5. Claims 5-13 were allowed in the previous Office Action.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navin Natnithithadha whose telephone number is (571) 272-4732. The examiner can normally be reached on Monday-Friday, 8:00-4:00.

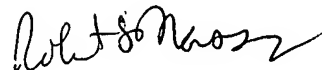
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Navin Natnithithadha  
Patent Examiner  
GAU 3736  
13 February 2006



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